5/23/12

8. Anticipated Changes in the Next 18 Months

8.1 Lead Monitoring

Revisions to the monitoring requirements became effective January 26, 2011. The new regulations replaced the population oriented monitoring requirement with a requirement to add Pb monitors to the urban NCore monitors. The EPA also lowered the emission threshold from 1.0 tpy to 0.50 tpy for industrial sources of lead (e.g., lead smelters and foundries). One source located in Orange County was determined to have the potential to violate the standard due to the amount of lead processed at the facility and the past results from nearby ambient monitoring. The NYSDEC will continue to operate the ambient lead monitor that is already operating near that facility. Routine data review showed that during the first quarter of 2011, there were a couple of sample dates that showed high levels of lead, which would lead to contravention of the new standard. Investigations at the facility led to enforcement actions although specific causes for the observed values were not discovered. Consequently an additional low volume PM_{10} sampler was put in place to collect daily filter samples for mass measurement and lead analysis using XRF in August.

The emission threshold for airports was maintained at 1.0 tpy. In addition, an airport monitoring study will be implemented to determine the need for monitoring of airports which emit less than 1.0 tpy of lead. Under this new rule lead monitoring is required for a minimum of one year at 15 additional airports that have been identified as having characteristics that could lead to ambient lead concentrations approaching or exceeding the lead NAAQS. Brookhaven and Republic airports in Suffolk County, New York have been designated as such. Monitoring commenced at Brookhaven in October 2011, while the Republic site is expected to begin starting the second quarter, 2012.

The NYSDEC currently has two urban lead monitors at the NATTS sites (Rochester, Bronx). The Rochester site is also a designated NCore site. It is the Regional Administrator's discretion to approve site substitution for the population oriented monitoring requirement. These monitors will take advantage of the allowance for the submission of PM_{10} lead data in place of TSP lead data. The NYSDEC acknowledges that the use of a PM_{10} monitor for lead compliance monitoring will be discontinued and replaced with a TSP monitor if a three month average lead concentration from one of these sites exceeds $0.1 \mu g/m^3$.

8.2 Special Purpose Monitors

8.2.1 Tonawanda Community Air Quality Study

Although the original study funded by EPA concluded in 2008, NYSDEC has continued sampling at two of the four study sites with State monies. The Tonawanda II site at Brookside Terrace will remain in operation as part of the permanent network, while the Grand Island Blvd. industrial site will be maintained as a special purpose monitor, resources permitting. Figures 8.1 and 8.2 illustrate trend charts for benzene and formaldehyde demonstrating emission reductions.

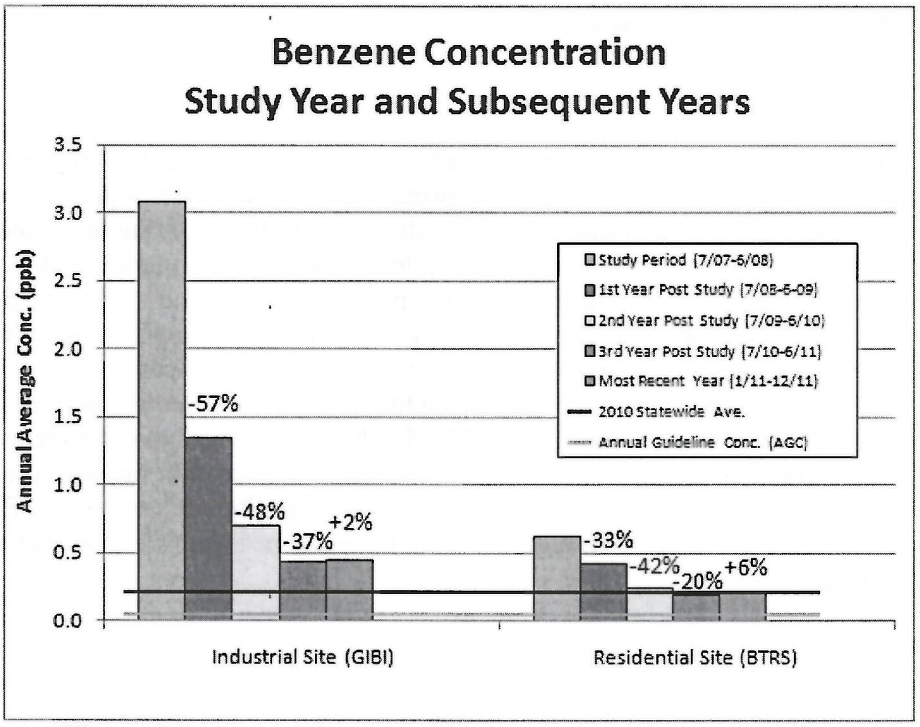

Figure 8.1 Annual Averages for Benzene at Tonawanda Sites

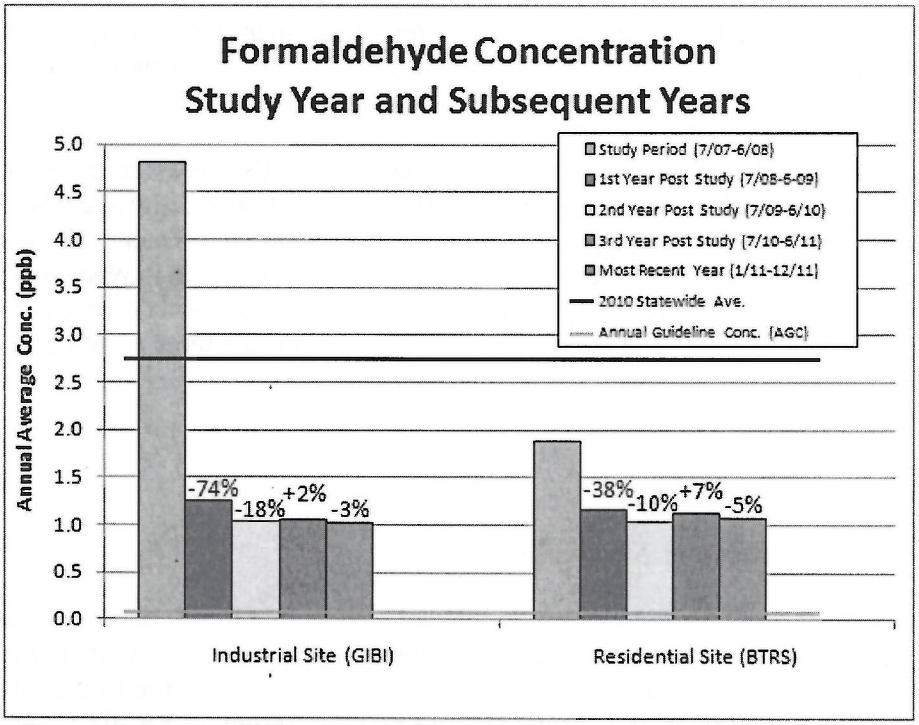

Figure 8.2 Annual Averages for Formaldehyde at Tonawanda Sites

8.2.2 New York State Ambient Mercury Baseline Study

New York has established regulations to control mercury from coal-fired powered plants in a two-phase approach, with Phase I taking effect on January 1, 2010 and Phase II taking effect on January 1, 2015. The goal of Phase I is to reduce power plant emissions by 50% from 1999 levels, and preliminary indications are that these emissions have actually been reduced by about 65%. Phase II calls for 90% emission cuts. In order to track the progress of in- and out-of-state emissions reductions, the NYSDEC seeks to continue operation and maintenance of mercury wet deposition samplers and speciated Tekran systems.

In 2008 NYSDEC was awarded an EPA grant to conduct this study at two existing urban sites: New York Botanical Garden in the Bronx (AQS Number: 36-005-0083), and Rochester (AQS Number: 36-055-1007) for a period of two years. The Tekran Model 2537B, 1130 and 1135 Mercury Speciation Units were used to measure elemental, reactive gaseous and particle bound mercury species in the ambient air. The wet deposition collector system, manufactured by N-CON Systems Co. Inc., and equipped with an ETI NOAH IV Precipitation Gauge was collocated at each site. The field data collection concluded in the fall of 2010. The results of the study were presented at the National Air Toxics Monitoring and Data Analysis Workshop in April 2011. The final report was submitted to the EPA in May 2011. The NYSDEC is seeking additional funding sources to continue data collection at these sites.

8.2.3 Community Air Screen Program

The New York State Department of Environmental Conservation (DEC), through funding provided by the United States Environmental Protection Agency (EPA), implemented a community-based screening program for toxic air pollutants. The purpose of DEC's Community Air Screen program is to conduct air quality surveillance at the community-level with the help of local community groups and interested citizens.

DEC will provide the sampling equipment, train people on how to use the equipment and work with the community to determine the best location and time period for sampling. All air sampling equipment will be returned to the DEC offices in Albany for analysis of the samples and interpretation of the results.

Approximately 12 to 18 applicants will be selected for this program. A total number of sixty (60) air samples will be analyzed statewide. The samples will be analyzed by DEC laboratory using method TO-15. Individuals as well as not-for-profits and neighborhood and community groups in New York State may apply. The deadline for application is May 24, 2012 and applicants will be notified of the selection June 25, 2012.

8.3 Proposed Changes at Existing Sites

As part of the new requirements specified in the revised Monitoring Regulations Parts 53 and 58, a network assessment was performed to determine "if the network meets the monitoring objectives defined in appendix D to this part, whether new sites are needed, whether existing sites are no longer needed and can be terminated, and whether new technologies are appropriate for incorporation into the ambient air monitoring network." As a result of this exercise, NYSDEC is proposing the following modifications to the existing network.

8.3.1 Site Closures

Except noted otherwise the proposed closures will take place at the end of 2012. Considerations were given to factors including: redundancy, historical data, federal requirements, as well as available personnel and equipment resources. Multiple discussions amongst Division Bureaus were conducted before the final list was compiled.

8.3.1.1 Belleayre

NADP site at Biscuit Brook duplicates acid deposition measurements. Historically ozone and sulfur dioxide data have shown concentrations to be below levels of concern. Monitoring is not mandated by federal requirements.

8.3.1.2 Camden

Single parameter ozone site that shows the lowest observed levels in the entire State consistently.

8.3.1.3 Camp Georgetown

The site ceased operation in April 2012 as power was shut off when the state correctional facility was closed. The Department is pursuing to establish a substitute site at a suitable location nearby.

8.3.1.4 Elmira

Redundant monitoring at Pinnacle already, relocate acid deposition to Pinnacle. It is anticipated that an additional full suite monitoring site in the Binghamton area will be established should the Marcellus Shale gas drilling goes forward.

8.3.1.5 Grafton Lakes State Park

Redundant ozone and SO_2 monitoring at Loudonville, relocate acid deposition to Loudonville, area ozone monitor also present at Stillwater.

8.3.1.6 IS 293

Redundant single parameter TEOM site.

8.3.1.7 La Tourette

Redundant monitoring at Fresh Kills West.

8.3.1.8 Manhattanville Post Office

Redundant single parameter TEOM site.

8.3.1.9 Niagara Falls

Relocate toxics and PM_{10} to Buffalo, acid deposition and FRM $PM_{2.5}$ to Amherst. Other redundant parameters are already monitored at these sites.

8.3.1.10 Nick's Lake

Redundant NADP acid deposition monitoring at Moss Lake.

8.3.1.11 PS 154

Redundant single parameter TEOM site.

8.3.1.12 Syracuse COM

Maintenance requirement will expire, scheduled to close in early 2013.

8.3.1.13 Westfield

Redundant Site, monitoring covered by Dunkirk.

8.3.2 Streamlining of Monitored Parameters

8.3.2.1 Amherst

Discontinue redundant NO_x monitoring.

8.3.2.2 Eisenhower Park

Discontinue acid deposition monitoring.

8.3.2.3 Morrisania II

This will become a single continuous $PM_{2.5}$ TEOM site once IS 52 is fully operational.

8.3.2.4 Mt. Ninham

Discontinue acid deposition monitoring, redundant NADP site at West Point.

8.3.2.5 New York Botanical Garden

Discontinue continuous GC for PAMS measurements at Pfizer Lab, not required under current ozone nonattainment classification. Sensitivity deterioration and frequent failures have rendered the measurements unreliable and of limited value.

8.3.2.6 PS 19

Discontinue redundant PM_{10} monitoring.